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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,964	09/09/2003	Dale A. Sylvan	202241-0028	3142

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EXAMINER	
KRAMER, DEVON C	
ART UNIT	**PAPER NUMBER**
3683	

DATE MAILED: 10/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/658,964	SYLVAN ET AL.	
	Examiner	Art Unit	
	Devon C. Kramer	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 13-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/25/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2) Claims 1-2, 6-9, 14-15 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al (6155386) in view of Summa (3917042).

In reference to claims 1, 15, 17-20, Hirai et al teaches a braking system for a shaft (12) mounted for rotation, the braking system comprising: a brake disc (4) coupled to the shaft for rotation therewith, the disc including a disc face having a disc contact surface (5); a brake plate (3) mounted to be relatively stationary, the brake plate including a plate face positioned substantially parallel and adjacent to the disc face, a spring (6) biasing the plate face against the disc face, a coil (2) that is powered to create a magnetic field to move the brake disc between an engaged and retracted position. Hirai et al lacks the teaching of the plurality of plateaus and recesses on both the brake disc and the brake plate. Please see the rejection of claim 2 below for the specific angle limitation.

Summa teaches a plurality of plateaus, ramps and recesses on engaging surfaces (figures 6-10), which are capable of use in brakes.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the contacting disc and plate surfaces of Hirai et al with the

plurality of plateaus and recesses as taught by Summa in order to positively lock the plate to the disc in order to prevent further relative motion for quick engagement and disengagement. (See Summa col. 1 lines 1-7)

In reference to claims 2, 6, 14 Summa is silent to the angle of the ramps.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the ramps of Summa with an angle of 10 degrees relative to the disc face merely because it would have been a design choice based on the materials used and the force desired to be absorbed by the ramps. Further, please note that it would have been obvious to make the ramp angles 10 degrees since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

IN re claims 7 and 21, please see the combination of the rejection of claim 1 and 2 above.

In re claims 8-9, Hirai et al as modified by Summa teaches an equal number of disc and plate plateaus angled at the same angle. (see figure 10 of Summa)

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4) Claims 3-5, 10-11, 13 and 16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al (6155386) in view of Summa (3917042) and further in view of Prasse et al (6112873).

In re claims 3, 10, 13, and 16, the brake of Hirai et al as modified by Summa lacks the exact number of ramps and plateaus claimed.

Prasse et al teaches a small number of ramps and plateaus (figure 1). Please note that Prasse et al is used as a reference because of the teaching of a limited number of ramps and plateaus.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the ramps and plateaus of Hirai et al as modified by Summa with a smaller number of ramps and plateaus as taught by Prasse et al since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Providing exactly three ramps and plateaus is design choice.

In reference to claims 4-5, and 11, Hirai et al as modified by Summa and further modified by Prasse et al are silent to the angle of the ramps.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the ramps of Hirai et al as modified Summa and further modified by Prasse et al with an angle of 10 degrees relative to the disc face merely because it would have been a design choice based on the materials used and the force desired to be absorbed by the ramps. Further, please note that it would have been

obvious to make the ramp angles 10 degrees since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Response to Arguments

3) Applicant's arguments filed 8/17/05 have been fully considered but they are not persuasive. Applicant argues that the teachings of Summa cannot be combined with the teachings of Hirai et al because one device is a brake and the other is a clutch. Please note that each device operates in a similar manner. Both of the reference utilize a friction plate to transfer force. Please note that it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the device of Summa is reasonably pertinent to the particular problem with which the applicant was concerned.

Please note that the definition of "clutch" is "the claws in the act of grasping or seizing firmly" in Websters. Applicant further argues that the examiner has failed to show where either of the references teaches a spring. Please see spring 6 in the reference to Hirai.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

1986). Please note that it is only the ramp and plateau arrangement of Summa that is being substituted into the brake of Hirai.

Conclusion

4) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devon C. Kramer whose telephone number is 571-272-7118. The examiner can normally be reached on Mon-Fri 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on (571)272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Devon C Kramer
Primary Examiner
Art Unit 3683

DK

DEVON C. KRAMER
PATENT EXAMINER

10/24/05